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CHAPTER 12

Antitrust and Sector-Specific Regulation in the European Union: The Case of Electronic Communications

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Contents

12.1 INTRODUCTION

To guarantee access and effective competition in the electronic communications sector (i.e., the infrastructures for the services of the Information Society such as fixed telephony network, mobile telephony network, Internet connections, cable TV and satellite connections), public intervention in the European Union mainly takes place with two instruments that have converged over time.[1] On the one hand, there is the antitrust law that has been applied extensively to become a sort of 'regulatory antitrust'.[2] On the other hand, there is the sector regulation whose mode of intervention has been aligned on antitrust law methodologies to become a sort of 'preemptive competition law'.[3] Such evolution is interesting because it questions the (remaining) differences between both instruments and their optimal coordination and because the regulation of electronic communications is the most advanced and might be transposed to other networks industries (energy, railways or even possibly financial services).[4]

This paper studies this evolution in the following way. Section 12.2 gives a broad picture of the substantive and the institutional issues. Section 12.3 goes into more depth on the application of both branches of antitrust law (*ex post* and *ex ante*) since the last fifteen years. Section 12.4 deals with sector regulation since its last modification three years ago. Section 12.5 tries to propose an efficient balance between both instruments as well as an optimal coordination between the different institutions in charge. Finally, Section 12.6 provides a conclusion.

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[1] Contrast with the tendency in the US where there is no such convergence; see Geradin and Sidak (2005).

[2] To adopt the expression of Cave and Crowther (2005) and de Streel (2004).

[3] To adopt the expression of Buiges (2004).

[4] As suggested by the then Competition Commissioner Mario Monti (2003).

12.2 A BROAD PICTURE

12.2.1 Substantive law

In the European electronic communications sector,[5] public authorities rely on several instruments to discipline competitive behaviours, as shown in Table 12.1: (1) competition law that applies to electronic communications, for example, to any sector of the economy[6] and that may be divided into two branches (*ex post* competition law

Table 12.1 Competition law and sector regulation[7]

	Competition law – *ex post*	**Competition law – *ex ante***	**Sector regulation/ Significant market power (SMP) regime**
Objective	Maintain competition Increase competition → Market structure is broadly satisfactory		Increase competition Mimic competition → Market structure is not satisfactory
Burden of proof to intervene	1. Market definition 2. Dominant 3. Anticompetitive conduct: agreement or abuse of dominance (high)	1a. Notified concentration 1b. Market definition 2. Significant impediment to effective Competition (low) (Conduct presumed)	1a. Market selection (very high) 1b. Market definition 2. SMP = dominance (Conduct presumed)
Remedies	Mainly behavioural Fines Private damages	Mainly structural	Mainly behavioural

Note: The shadow area if the triggering factor for each legal instrument.

[5] For the definition of electronic communication network and service, see article 2 of the *Framework Directive*.

[6] Case 41/83 *Italy v. Commission (British Telecommunications I)* [1985] ECR 873. Indeed, the application of sector regulation does not remove antitrust jurisdiction: Commission Access Notice, para 22. The situation is more nuanced in the US where the Supreme Court decided that, when sector regulation has been applied, competition laws should not be applied in addition: *Verizon v. Trinko* 540 U.S. 682 (2004). On the different of approaches, see Larouche (2006).

[7] This table is adapted from a presentation that Pierre Larouche made at an ETNO workshop in October 2005.

that punishes anticompetitive behaviours (agreements and abuses of dominant position),[8] and *ex ante* competition law that prevents anticompetitive behaviours (mergers and autonomous full function joint ventures));[9] (2) sector regulation that always applies *ex ante* to prevent anticompetitive behaviour.[10]

On the one hand, competition law has one main objective which has become prevalent over time and is the maximization of consumer welfare.[11] This implies that competition law aims at efficiencies (allocative, productive and dynamic) on the market by ensuring the competitive structure is maintained and possibly even strengthened.[12]

To achieve those gaols, an antitrust authority applies *ex post competition law* in several steps: (1) it starts by defining the relevant

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[8] Articles 81 and 82 EC and Council regulation 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in articles 81 and 82 of the Treaty, O.J. [2003] L 1/1, hereinafter *Regulation 1/2003*.

[9] Council regulation 139/2004 of 20 January 2004 on the control of concentrations between undertakings, O.J. [2004] L 24/1, herein *Merger Regulation*.

[10] The sector regulation has been radically reformed in 2003 and is now mainly made of four harmonization directives adopted under article 95 EC: directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (*Framework Directive*), O.J. [2002] L 108/33; directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorization of electronic communications networks and services (*Authorisation Directive*), O.J. [2002] L 108/21; directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and services (*Access Directive*), O.J. [2002] L 108/7; directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (*Universal Service Directive*), O.J. [2002] L 108/51. It is also made of one liberalization directive adopted under article 86 EC: Commission directive 2002/77/EC of 16 September 2002 on competition in the markets for electronic communications networks and services, O.J. [2002] L 249/21.

[11] In general, on the objectives of European competition law, see the contributions in Ehlermann and Laudati (1998).

[12] See in particular, Case T-87/05 *Energias de Portugal v Commission* [2005] ECR II-0000, para 91 where the Court of First Instance accepted that European competition law (in the case merger control) may be used to increase the level of competition in the market.

market according to the small but significant nontransitory increase in price (SSNIP) or the 'hypothetical monopolist test';[13] (2) it then determines whether one or several undertakings have sufficient market power (in particular a single or joint dominant position, which is a level of market power sufficient to behave to an appreciable extent independently of competitors, customers, and ultimately consumers);[14] (3) finally, the authority determines whether the undertakings with market power have committed an anticompetitive practice (agreement or unilateral abuse). If it is this case, the authority imposes a fine and/or behavioural remedies (to put an end to the anticompetitive practice) or structural remedies if necessary and proportionate.[15] A national court may also provide for private damages.[16] Thus, an intervention under *ex post* competition law is triggered by an anticompetitive conduct.

Antitrust authority applies *ex ante competition law* in several steps. (1a) A concentration should be first notified when fulfilling certain criteria and should not be enforced before antitrust approval.[17] (1b) The authority then defines market according to the SSNIP economic methodology. (2) It also determines whether the concentration would significantly impede effective competition (in particular by creating a single or collective dominant position).[18] Such assessment is done in two phases. After the first phase, the authority decides if it does not

[13] Commission notice on the definition of relevant market for the purposes of community competition law, O.J. [1997] C 372/5. For an application to the electronic communication sectors, see Commission Guidelines of 9 July 2002 on market analysis and the assessment of significant market power under the community regulatory framework for electronic communications networks and services, OJ [2002] C 165/6, herein *Commission Guidelines on market analysis*, para 33–69.

[14] Case 27/76 *United Brands v Commission* [1978] ECR 207; Case 85/76 *Hoffman-La Roche v Commission* [1979] ECR 461; Case T-342/99 *AirTours v. Commission* [2002] ECR II-2585, para 62; Guidelines on market analysis, paras 70 to 106.

[15] Article 7 of regulation 1/2003.

[16] Case C-453/99 *Courage and Crehan* [2001] ECR I-6297.

[17] A concentration should be notified to the European Commission when (1) it is a merger or an autonomous full function joint venture and (2) it reach certain threshold of worldwide and European turnover: Articles 1 and 3 of the Merger Regulation.

[18] Article 2 of the Merger Regulation.

have serious doubts that the concentration would impede effective competition, or conversely, it opens a second phase of investigation.[19] After this second phase, the authority decides whether the concentration would significantly impede effective competition or not.[20] If the authority has doubts or thinks that the concentration would indeed impede competition, the notifying parties may propose during the phase and/or phase remedies that should remove all competitive concerns (the remedies should preferably be structural, although they may be behavioural provided they affect the structure of the market).[21] Otherwise, the authority prohibits the merger. Thus, an intervention under *ex ante* competition is triggered by a notified concentration which significantly impedes effective competition.

On the other hand, *sector regulation* has three objectives: promotion of effective competition, the internal market, and the users' interest.[22] However, the law gives important margin of discretion to the regulatory actors on the ranking of those objectives that may be contradictory and on the means to achieve them. In particular, the law does not decide whether the regulators should actively promote the development of infrastructure (e.g., broadband connections) as a soft industrial policy marker[23] or merely control the market as a hard trustbuster.[24] The part of sector regulation that deals with market power mainly aims to ensure efficiency by favouring competitive market structure or by mimicking the results of a competitive market structure.[25]

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[19] Article 6 of the Merger Regulation. The first phase is of 25 or 35 working days.
[20] Article 8 of the Merger Regulation. The second phase is of 95 or 105 working days.
[21] Case T-102/96 *Gencor v Commission* [1999] ECR II-753, para 319; Case C-12/03P *Tetra Laval v Commission* [2005] ECR I-0000, para 86.
[22] Article 8 of the Framework Directive.
[23] As suggested in Communication from the Commission of 1 June 2005, i2010 – A European Information Society for growth and employment, COM(2005) 229.
[24] On those ambiguities in objectives, see Granham (2005, pp. 8–14) and Hocepied and de Streel (2005, pp. 147–154).
[25] European Regulators Group (ERG) Common Position of 1 April 2004 on the approach to appropriate remedies in the new regulatory framework, ERG (03) 30rev1, herein *ERG Common Position on remedies*, Chapter 4.

To achieve those goals, a regulatory authority follows three steps when imposing obligations on the operators.[26] (1a) It starts by selecting markets where sector regulation would be more efficient than antitrust to solve competition problems.[27] In practice, it does so according to three cumulative criteria (high permanent and nonstrategic entry barriers, no competitive dynamics behind these barriers and inefficiency of antitrust remedies to solve the competitive problems).[28] (1b) Then, it delineates the boundaries of the selected markets according to antitrust methodologies (the SSNIP or hypothetical monopoly test).[29] (2) It determines also whether an operator enjoys a single or collective dominant position or could leverage a dominant position from a closely related market.[30] (3) If it is the case, it imposes proportionate regulatory remedies to be chosen from a menu provided in the directives (transparency, nondiscrimination, accounting separation, compulsory access and price control), or any other type of remedy (even structural ones like divestiture) with the prior agreement of the Commission.[31] Thus, an intervention under sector regulation is triggered by a market that has the characteristics where competition law remedies would be insufficient.

[26] On those steps, see Buiges (2004), Cave (2004), Garzaniti (2003, chapter 1), Krüger and Di Mauro (2003), and de Streel (2004).

[27] Recital 27 of the Framework Directive.

[28] Recitals 9–16 of the Commission Recommendation 2003/311 of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation, OJ [2003] L 114/45, herein *Commission Recommendation on relevant markets*.

[29] Article 15 of the Framework Directive; Commission Recommendation on relevant market; Commission Guidelines on market analysis, paras 33–69.

[30] Articles 14 and 16 of the Framework Directive; Commission Guidelines on market analysis, para 70–106; Revised European Regulators Group Working Paper of September 2005 on the SMP concept for the new regulatory framework, ERG (03) 09rev3.

[31] Articles 8–13 of the Access Directive (for the remedies regarding the wholesale markets); articles 16–19 of the Universal Service Directive (for the remedies regarding the retail markets); and ERG Common Position on remedies.

Sector regulation has been aligned to antitrust methodologies because it was supposed to meet several good governance principles.[32] It makes the regime more flexible and based on solidly grounded economic principles that ensure regulatory decisions closer to the reality of the market. And this increased flexibility would not be at the expense of legal certainty (as decisions will be based on more than forty years of antitrust case-law), nor harmonization (as NRAs' decisions are based on legal principles that are strongly Europeanized). The system was also deemed to ensure a progressive removal of obligations as competition develops in the different markets (market-by-market sunset clauses) and facilitates the transition towards the mere application of competition law when sector regulation will no longer be necessary.

12.2.2 Institutional design

To implement such instruments, many institutions are involved as illustrated in Figure 12.1.

On the one hand, the main actors in applying antitrust are the twenty-five National Competition Authorities (NCAs), the European Commission, and the national courts. *Ex post* antitrust may generally be applied concurrently by the Commission (its Competition Directorate General),[33] the NCAs,[34] and the national courts.[35]

[32] Buiges (2004) and Cave (2004).

[33] Article 4 of regulation 1/2003. Note that the Commission may only intervene when the trade between member states is susceptible to be affected by the allegedly anticompetitive practice: Guidelines of the Commission of 30 March 2004 on the effect on trade concept contained in articles 81 and 82 of the Treaty, O.J. [2004] C 101/81.

[34] Article 5 of regulation 1/2003 and specific national competition laws. In some member states, the NRAs have concurrent powers with the NCAs to apply *ex post* antitrust in the electronic communications sector; see, for instance, the UK: Office of Fair Trading Guidelines of December 2004 on Concurrent application to regulated industries.

[35] Article 6 of regulation 1/2003 and specific national competition laws.

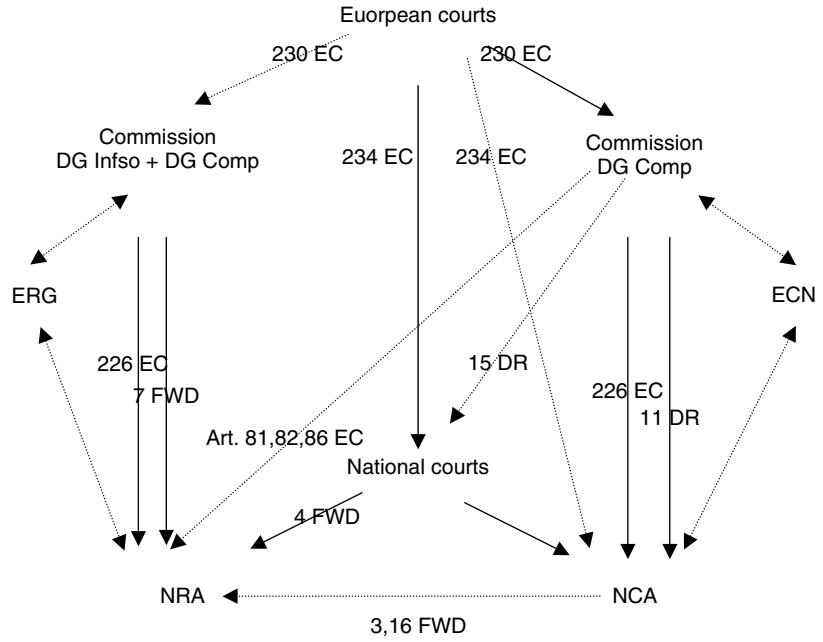

Figure 12.1 Relationship between regulatory actors.[37] Straight line: strict control; Dotted line: loose control; EC: EC Treaty; 226 EC: infringement procedure against a Member State; 230 EC: annulment procedure against the Commission; 234 EC: preliminary ruling question; FWD: Framework Directive 2002/21; DR: Decentralisation Regulation 1/2003; ERG: European Regulators Group; ECN: European Competition Network (Telecom Working Group); NRA: National Regulatory Authority; NCA: National Competition Authority.

Ex ante antitrust is applied exclusively by the Commission if the concentration has a community dimension[38] or by NCAs if the concentration does not have such community dimension.

To ensure checks and balances and efficient decisions, the NCAs are under the control of several authorities. At national level, they

[36] For simplicity, I do not include the role of the National Ministries, the CoCom and the Council. AU1

[37] For simplicity, I do not include the role of the National Ministries, the CoCom and the Council.

[38] Article 2 of the Merger Regulation. In some circumstances, the Commission may refer back to a NCA a concentration with community dimension: articles 4 and 9 of the Merger Regulation.

are controlled by the national courts as any interested party may appeal an NCA decision.[39] At the European level, NCAs are under the double control of the Commission which may decease an NCA before it adopts a final decision to ensure the consistency of antitrust law across member states,[40] and which may initiate an infringement procedure at the Court of Justice against a member state whose NCA violated European law.[41] NCAs also face peer pressure through their participation in the European Competition Network,[42] which has a specific working group on telecommunications matters. Finally, the NCAs which have the characteristics of a tribunal (such as a body established by law, permanent, independent, applying rule of law and whose jurisdiction is compulsory, procedure is *inter partes*) may directly ask preliminary questions to the Court of Justice on the interpretation of European law.[43] In this sense, the NCAs are under the direct supervision of the Court of Justice.

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[39] The organization of such appeal procedure is left to the member state according to their procedural autonomy, but should be effective according to the general principles of European law derived from article 10 EC: Case C-276/01 *Steffensen* [2003] ECR I-3755, para 60, case C-453/99 *Courage and Crehan* [2001] ECR I-6297, para 29, case C-255/00 *Grundig Italiana* [2002] ECR I-8003. Note that the Commission may help the national courts in their interpretation of European antitrust: article 15 of the regulation 1/2003 and Commission notice of 30 March 2004 on the cooperation between the Commission and the courts of the EU member states in the application of articles 81 and 82 EC, O.J. [2004] L 101/54.

[40] Article 11(6) of the regulation 1/2003 and paras 50–57 of the Commission notice of 30 March 2004 on cooperation within the Network of Competition Authorities, O.J. [2004] C 101/43.

[41] Article 226 EC, as interpreted by Case 103/88 *Fratelli Costanzo v Commune de Milano* [1989] ECR I-1839.

[42] Commission notice of 30 March 2004 on cooperation within the Network of Competition Authorities, O.J. [2004] C 101/43.

[43] Article 234 EC. According to these criteria, a preliminary question from the Spanish NCA was accepted in Case C-67/91 *Dirección General de Defensa de la Competencia v Asociación Española de Banca Privada and others (Spanish Banks)* [1992] ECR I-4785, but a question from the Greek NCA was refused in case C-53/03 *Syfait and Others v GlaxoSmithKline* [2005] ECR I-0000.

The Commission is controlled by the European courts where its decision may be appealed.[44] The courts examine whether the procedures have been respected, the substantive law (e.g., the concept of dominance) has been correctly interpreted, the facts have been correctly established and no manifest errors in the economic assessment of those facts have been done.[45]

Thus, at the top of the pyramid lie the European courts whose case-law should be respected by all administrative and judicial national and European authorities according to the principle of the primacy of European law.[46] In this context, the national courts may refer preliminary ruling question to the Court of Justice.[47]

On the other hand, sector regulation is applied concurrently by the NRAs[48] and by the national courts.

To ensure checks and balances and efficient decisions, the NRAs are under the control of several authorities. At the national level, they should cooperate closely with the NCAs as SMP assessment involves antitrust methodologies,[49] hence are under the scrutiny of the antitrust authorities. In addition, NRAs are controlled by the national courts whose organization is left to the member states but the European law minimally provides that appeal body should take into account the merits of the case.[50] At the European level, the NRAs are under a triple control[51] of the Commission (Directorate General Information Society and Media and Competition Directorate General): first, the Commission reviews (in a preventive manner) in two

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[44] Article 230 EC.

[45] Case C-12/03P *Tetra Laval v Commission* [2005] ECR I-0000, para 39. See Vesterdorf (2005).

[46] Case 6/64 *Flaminio Costa v ENEL* [1964] ECR 585.

[47] Article 234 EC.

[48] Article 3 of the Framework Directive.

[49] Articles 3 and 16 of the Framework Directive.

[50] Article 4 of the Framework Directive, Lasok (2005).

[51] Hocepied and de Streel (2005).

phases all NRAs' draft decisions affecting trade between member states and may veto part of them when violating European law;[52] second the Commission may take (in a repressive manner) to the Court of Justice a member states whose NRA violated European law;[53] third the Commission may take an antitrust decision that would be an indirect critique of the regulator's policy.[54] NRAs also face peer pressure through their participation in the European Regulators Group (ERG).[55] However, contrary to their antitrust counterparts, the NRAs may not ask preliminary questions to the Court of Justice because of their obvious administrative nature.[56]

Again at the top of the pyramid lie the European courts whose case-law should be respected by all administrative and judicial national and European authorities.

[52] Article 7 of the Framework Directive and Commission recommendation 2003/561 of 23 July 2003 on notifications, time limits and consultations provided for in article 7 of directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, OJ [2003] L 190/13. After the first phase of one month, the Commission may merely comment on the compatibility of the NRA draft decision with EU law, or if it has doubts it may open a second phase review. After this second phase review of two months, the Commission may (but is not obliged to) veto the NRA draft decision if it violates EU law.

[53] Article 226 EC (see note 39). However, until now, the all infringement actions related to violation of European law by a national legislator and not by an NRA.

[54] Articles 81, 82, 86 EC. This was the case in the decision *Deutsche Telekom*.

[55] Commission decision of 29 July 2002 establishing the European Regulators Group for Electronic Communications Networks and Services, O.J. [2002] L 200/38, as modified by Commission decision of 14 September 2004, O.J. [2004] L 293/30. See the website of ERG: http://erg.eu.int.

[56] Case C-256/05 *Telekom Austria* [2005] ECR I-0000, paras 10–11 and para 45 of the Opinion of Advocate General Geelhoed in case C-462/99 *Connect Austria Gesellschaft für Telekommunikation v Telekom-Control-Kommission, and Mobilkom Austria* [2003] ECR I-5197.

12.3 COMPETITION LAW

12.3.1 *Ex post* competition law

12.3.1.1 Substantive issues

(1) ***The mode of intervention and the type of cases taken*** At the European level, the mode of intervention of the Commission in the electronic communications sector was based on broad sectoral approach, which is different from the interventions in the other sectors of the economy based on a case-specific approach. In fact, the Commission behaves more like an industrial regulator than a mere antitrust authority. Thus, it adopted three general guidelines,[57] which explained how antitrust rules would apply to some competitive problems and were not based on a stock of previous individual cases: in 1991, on the application of competition rules to the telecommunications sectors;[58] in 1998, on the application of antitrust rules to access agreement;[59] and in 2000, on the application of antitrust rules to the compulsory access of the local loop (i.e., the last mile of the network where the economies of scale and scope are the largest).[60]

The Commission also conducted six sector enquiries or quasisector enquiries where the Commission sent questionnaire to all the operators to better understand the dynamics of the marketplace and

[57] Guidelines have also been used in other network industries like the postal sector: notice from the Commission on the application of the competition rules to the postal sector and on the assessment of certain state measures relating to postal services, O.J. [1998] C 39/2.

[58] Commission guidelines on the application of EEC Competition rules in the telecommunications sector, O.J. [1991] C 233/2.

[59] Commission notice of 31 March 1998 on the application of competition rules to access agreements in the telecommunications sector, O.J. [1998] C 265/2, hereinafter *Access Notice*.

[60] Communication from the Communication of 26 April 2000 on the unbundled access to the local loop, O.J. [2000] C 272/55.

possibly identify anticompetitive practices:[61] in 1997, on the high prices for international calls;[62] in 1998, on the high prices for fixed-to-mobile calls;[63] in 1999, on the delivery of leased lines;[64] in 2000, on the high prices for mobile international roaming,[65] and on the refusal to give access to the local loop;[66] in 2004, on the sales of sports rights to 3G and Internet.[67]

In a second stage and on the basis of the information collected during the sector enquiries, the Commission opened several individual cases.[68] So far, all cases cover pricing practices that were either exploitative (excessive prices) or exclusionary (price squeeze or predatory pricing). They took on average two to three years to be decided and most of them have been settled informally. As a consequence of this approach, there has been few formal decision, hence the case-law in the sector is relatively poor. However, the few decisions should not hide the fact that Commission intervention has been more intense in electronic communication sector than in the other sectors of the economy (Table 12.2).

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[61] Sector enquiries are based on article 17 of regulation 1/2003. In quasisector enquiries, no formal sector enquiry were opened, but questionnaires were sent to all operators of the market segment under review. On these enquiries: Choumelova and Delgado (2004).

[62] IP/97/1180 of 19 December 1997; IP/98/763 of 13 August 1998; IP/99/279 of 24 April 1999.

[63] IP/98/141 of 10 February 1998; IP/98/707 of 27 July 1998; IP/98/1036 of 26 November 1996: IP/99/298 of 4 May 1999.

[64] IP/99/786 of 22 October 1999; Working Document of the Commission services of 8 September 2000 on the initial results of the leased lines sector inquiry; IP/00/1043 of 22 September 2000; IP/02/1852 of 11 December 2002.

[65] IP/00/111 of 4 February 2000; Working Document of Commission services of 13 December 2000 on the initial findings of the sector inquiry into mobile roaming charges.

[66] IP/00/765 of 12 July 2000. Report done by Squire-Sanders-Dempsey, Legal Study on Part II of the Local Loop Sectoral Inquiry, February 2002, available at http://www.europa.eu.int/comm/competition/antitrust/others/sector_inquiries/local_loop/.

[67] IP/04/134 of 30 January 2004. Concluding Report of the Commission of 21 September 2005 on the Sector Inquiry into the provision of sports content over third generation mobile networks.

[68] For an overview of the cases: Garzaniti (2003, chapter 6).

Table 12.2 Commission abuse of dominant cases

Market segment	Exclusionary pricing	Exploitative pricing
Fixed narrowband	– Price squeeze between interconnection charges and retail business tariffs: DT 1996[69]	– Excessive accounting rates: OTE, ETP, Austria Telekom, Finland, Telecom Italia, Ireland, Portugal[70]
Fixed broadband	– *Price squeeze between full unbundling charges and retail ADSL tariffs: DT 2003* – Price squeeze between shared access charges and retail access tariffs: DT 2004[71] – *Predatory retail ADSL price: Wanadoo 2003* – Price squeeze between national/regional bitstream and ADSL tariffs: Telefonica 2006[72]	
Leased lines		– Excessive prices for international leased lines: Belgium, Italy, Spain 2002[73]
Mobile	– Price squeeze between mobile termination charges and retail mobile tariffs: KPN 2002[74]	– Excessive mobile termination: Germany and Italy 1999[75] – Excessive wholesale roaming charges: O2 and Vodafone UK 2004,[76] T-Mobile and Vodafone Germany 2005.[77]

Note: The cases in italics have led to a formal decision of the Commission and are cited in the Annex.

[69] Against Deutsche Telekom: IP/96/543 of 25 June 1996 and IP/96/975 of 31 October 1996.
[70] In Greece, Austria, Luxembourg, Finland, Ireland, Italy, Portugal: IP/99/279.
[71] IP/04/281 of 1 March 2004.
[72] MEMO/06/91 of 22 February 2006.
[73] In Belgium, Italy and Spain.
[74] IP/02/483 of 27 March 2002.
[75] Against all the mobile operators of Germany and of Italy: IP/99/298 of 4 May 1999.
[76] IP/04/994 of 26 July 2004.
[77] IP/05/161 of 10 February 2005.

At the national level, more decisions have been taken than at the European level, although the interventions of the NCAs vary significantly across countries.[78] For instance, the French Competition Council has been extremely active, in particular in opening of the local access market to stimulate broadband development[79] and condemning cartel in the mobile segment.[80] In general, most cases relate to exclusionary pricing practices.

(2) ***The remedies imposed*** In the majority of the cases, the Commission imposed behavioural remedies in the form of reducing of excessive price or ending a price squeeze. In some cases, the Commission went further and used *ex post* antitrust cases to speed up liberalization in the member statesthat were the most reluctant to open their markets.[81] No Member State has ever imposed a full structural separation of the incumbent, but the United Kingdom has recently in an unprecedented move imposed a quasi-structural separation of BT.[82]

12.3.1.2 Institutional issues

At European level, the *vertical relationship* between the Commission and the NCAs followed the approach set in the

[78] For a summary of some cases, see International Competition Network (2006, Appendix 1) and for a description of national price squeeze cases: Geradin and O'Donoghue (2005).

[79] Bourreau (2003). Competition Council Decision 00-MC-01 of 18 February 2002, *9Telecom/France Telecom I*, upheld by the Appeal Court of Paris decision in 30 March 2000, and Competition Council Decision 04-D-18 of 13 April 2004, *9Telecom/France Telecom II*, upheld by the Appeal Court of Paris in 11 January 2005; Competition Council Decision 05-D-59 of 7 November 2005, *9Telecom/France Telecom III*.

[80] Competition Council Decision 05-D-65 of 30 November 2005.

[81] For instance, the Commission closed the DT 1996 case on the conditions that the German government opened its telecommunications markets.

[82] Ofcom Final statements of 22 September 2005 on the strategic review of the telecommunications and undertakings in lieu of a reference under the Enterprise Act 2002.

Cooperation Notice: cases were decided by the best-placed authority and the Commission took only cases with sufficient European interest.[83]

The *diagonal relationship* between the Commission and the NRAs was complementary and followed the approach described in the Access Notice: priority was given to the NRAs.[84] Thus, if the NRAs were able to intervene, these cases have been passed to them,[85] although the Commission maintains a control over the regulators.[86] If the NRAs were not able to act, the cases usually have been settled by the Commission or, more exceptionally, a formal decision was adopted.[87]

At the national level, the *transversal relationship* between the NCAs and the NRAs was also complementary. For instance, the Dutch NCA intervened in mobile termination regulation when the NRA's decision had been quashed by a national court for lack of jurisdiction.[88] However, there may also be a conflict between the approach of NRA and the one of the NCA. For instance, the Italian NCA condemned Telecom Italia for a regulatory price squeeze case.[89]

[83] Commission notice of 30 March 2004 on cooperation within the Network of Competition Authorities O.J. [2004] C 101/43.

[84] Commission Access Notice, paras 26–32.

[85] For instance, for cases for excessive fixed retention rates and fixed termination rates have been dealt by the NRAs and only closed by the Commission when prices decreased sufficiently.

[86] For instance in the decision *Deutsche Telekom*, the Commission condemned a regulated operator (that enjoyed some discretion within the regulatory limit to reduce the abusive practice) as the Commission disagreed with the national regulator. For a critique of this decision, Geradin (2004, pp. 1549–1552), Larouche (2006) and Petit (2005, pp. 194–195).

[87] Commission decision *Wanadoo*.

[88] OPTA and NMa press release 03–50 of 5 December 2003.

[89] AGCM decision of 16 November 2004, annulled in May 2005.

12.3.2 *Ex ante* competition law: mergers and joint ventures

12.3.2.1 Substantive issues

(1) ***The type of cases notified*** In the electronic communications sector, several cases have been notified and decided by the Commission due to the reshaping of the industrial landscape in the aftermath of liberalization.[90] In the mid-1990s when telecom markets were progressively opened to competition, national incumbents set up joint ventures to offer enhanced international services to multinationals (e.g., Atlas joint venture between France Telecom and Deutsche Telekom).[91]

At the turn of the twenty-first century when consolidation of ICT industries took place, WorldCom (renamed MCI and recently bought by Verizon) was the leader in the restructuring of the Internet market by acquiring many rivals companies (e.g., acquisition of MCI and then Sprint). Similarly, Vodafone was the leader of the restructuring of the mobile markets by acquiring many rivals (e.g., acquisition of Airtouch of the US and then Mannesmann of Germany). At the same time when convergence was taking place, Internet and telecom companies merge or form joint venture to offer fully converged services (e.g., merger between AOL and Time Warner and between Vivendi and Seagram).[92]

More recently, there has been a consolidation in the pay-TV industry (e.g., NewsCorp buying Telepiu to form Sky Italia).[93] Today, incumbents from Western Europe are buying smaller foreign operators (e.g., Telefonica of Spain buying the English mobile operator O2), especially in Eastern Europe.

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[90] For a description of those cases, see Garzaniti (2003, chapter 8), Le Blanc and Shelanski (2003), and de Streel (2004).

[91] FT and DT extend this joint venture with Sprint of the US in *Global One*. See also the *Concert* joint venture between BT and MCI, and the *Unisource* joint venture between Telia of Sweden, KPN of the Netherlands and Swiss Telecom.

[92] See also decision *Vadafone/Vizzavi/Canal+*.

[93] See also decision *Sogecable/ViaDigital*.

However, except in the Nordic country,[94] there has been no full-fledged merger between incumbents because the customer demand is not yet Europeanized, the regulations vary significantly across countries and the governments are reluctant to accept such consolidation for reasons of national patriotism.

(2) ***The remedies imposed*** The types of remedies imposed have been diverse. The Commission imposed structural remedies that stimulate infrastructure competition (e.g., cable divestiture) for the parties to lose their dominant position on the traditional markets and their ability to leverage and foreclose entry in emerging markets.[95] As the effects of these measures could only take place with time, they were complemented by behavioural remedies aiming at forcing access to key facilities (e.g., content, fixed telecom infrastructure, mobile infrastructure, technical services for pay-TV or interactive-TV services).

As illustrated in Table 12.5 in the Appendix, the Commission has been more severe (read interventionist) in the electronic communications sector than in the economy as a whole because it blocked 2.2 per cent of the operations (instead of 0.6 per cent on average) and imposed remedies in 8.4 per cent of the cases (instead of 7 per cent on average).

This is due to several reasons. The first reason was to prevent a dangerous circle of self-reinforcing market power between related markets, whereby parties leverage their power from established markets (e.g., the local loop) to secure a dominant position on emerging markets (e.g., the digital interactive service) and, in turn, leverage back from the emerging market to strengthen their power on

[94] Merger between Telia of Sweden and Telenor of Norway later abandoned, and merger between Telia of Sweden and Sonera of Finland.

[95] Sometimes, such *ex ante* antitrust remedies have paved the way for the future regulation. For instance, compulsory access to local loop was imposed in 1999 in the *Telia/Telenor* decision and taken over one year later by sector regulation: European regulation 2887/2000 of the European Parliament and of the Council of 18 December 2000 on unbundled access to the local loop, O.J. [2000] L 336/4.

the established markets.[96] The second reason of the strict stance of the Commission was to support the liberalization program of the Commission. For instance, in the early joint ventures between incumbents to provide enhanced international services like Atlas, the member states concerned were encouraged to accelerate liberalization in order to make a clearing under conditions of the alliances possible. The dynamics of the process thus created a parallelism of interest in accelerating liberalization between incumbents (in order to have their alliances cleared), member states (in order to allow the development of the potential of their national markets) and the Commission (in order not to be obliged to block new services and new technologies).[97] The third reason of the strict stance of the Commission was to ensure noneconomic policy objectives, such as pluralism in the media in the merger involving content related services like AOL/TimeWarner.[98]

Note, however, that sector regulation has been taken into account when deciding the appropriate remedies. Thus, the Commission imposed more lenient remedies or no remedy when the behaviours of the parties to a joint venture were under strict control of a sector-specific authority and there were less risk of abuse and leverage.[99]

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[96] This vicious circle is particularly worrying in ICT sector for three reasons at least. First, several markets are only emerging and their development should not be controlled by a particular company. Second, these markets are evolving very quickly and any anticompetitive behaviour could have rapid and irreversible effects. Third, most of the markets are characterized by network effects, that lead to path dependency with early developers (first-mover advantage) becoming dominant by capturing new growth (bandwagon affect) so inefficient solution may be adopted: see Monti (2000).

[97] Ungerer (2001) referring to the decisions Atlas and GlobalOne.

[98] Arino (2004).

[99] For instance, the Commission imposed less remedy in Concert joint venture between BT and MCI that were strictly controlled by the English and American NRA than in Atlas joint venture between FT and DT that was not controlled by NRA. Such approach is in line with the case-law: joined cases T-374/94, T-375/94, T-384/94, T-388/94 *European Night Services and Others v Commission* [1998] ECR II-3141, para 221. Note that such an approach is not followed in

12.3.2.2 Institutional issues

The *vertical relationship* between the Commission and the NCAs was weak because the role of the latter in controlling merger was much less important than the one of the Commission (and also compared to their role at controlling anticompetitive behaviours) as most major cases were of European dimension, hence were the exclusive competence of the Commission. However, some important cases were referred back to the NCAs, for example, the merger Sogecable/Via Digital[100] decided by the Spanish authority.

The *diagonal cooperation* between the Commission and the NRAs has also been less intense than under *ex post* antitrust because of the short deadlines to decide a merger case. However, the situation improved over time and can also be seen now as complementary as the Commission relied on the NRA to implement merger remedies[101] or has taken the market analysis of the NRA into account when deciding whether a merger would be anticompetitive.[102]

12.3.3 Appraisal of the application of antitrust in the electronic communications sector

Regarding the use of antitrust, its expansive role in the electronic communications sector has been criticized. Veljanovski (2001)

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sector regulation where the NRA should assess a dominant/SMP position without taking account of the regulation in place on the analysed operator for the obvious reason of alleviating a vicious circle of lifting regulation only because there was regulation: Commission decision of 20 February 2004, case FI/2003/24–26 (markets 4 and 6) and Commission decision of 17 May 2005, case DE/2005/144 (market 9).

[100] Commission decision of 14 August 2002, *Sogecable/Via Digital*, M. 2845, upheld in joined cases T-346/02 and T-347/02 *Cableuropa v Commission* [2003] ECR II-0000. This case was very similar to the *NewsCorp/Telepiu* merger.

[101] Decision *Newscorp/Telepiu*, para 259.

[102] Commission decision of 19 September 2003, Vodafone/SinglePoint, M. 3245, para 24.

argues that the merger approach has been too stringent because economic literature[103] shows that anticompetitive leverage is more rare than lawyers would think. Larouche (2000) argues that competition law has been stretched beyond its reasonable limits and the institutional and legitimacy settings of antitrust do not justify its quasiregulatory role.[104] More generally, American authors like Audretsch et al. (2001), Evans and Schmalensee (2001), Katz and Shelanski (2004), or Posner (2001) emphasize the dynamic characteristics of the industries and the necessary adaptation of antitrust policy.[105]

However, given the history of the sector, an interventionist stance of antitrust in the electronic communications sector might be justified on static grounds (because dominant position is pervasive in the sector) as well as on dynamic grounds (because these dominant positions are often the result of past legal protection and not of private investment decisions taken in a competitive environment and whose incentives should be preserved).[106] Moreover, in sectors where effective competition does not yet exist but is possible in the future, there may be a case for antitrust to actively promote entry of competitors that are equally efficient than the incumbents, or even less efficient competitors, for two related reasons: on a overall market perspective, it may pay in the long run to have many actors competing, and on a individual firm perspective, efficiency may increase over time as the customer bases and the operation scales increases.[107] Therefore, there may be an economic case for a 'different antitrust' in sector where dominant position due to previous

[103] Rey and Tirole (2003).

[104] Although the Court of First Instance has implicitly admitted this quasi-regulatory role in case T-87/05 *Energias de Portugal v Commission* [2005] ECR II-0000, para 91.

[105] This has been recently implicitly recognized by the Court of First Instance in case T-328/03 *O2 Germany v Commission* [2006] ECR II-0000, para 110.

[106] Fingleton (2006) and Motta and de Streel (2006, pp. 109–112).

[107] Conseil de la Concurrence français (2003,p. 72) and the Annex of ERG Common Position on remedies.

incumbency is prevalent. Yet, it should always be justified with sound economic reasoning (which was not always the case in the merger cases so far) and it should be strictly limited to the network industries that were developed under legal monopoly protection and not be extended to other sectors of the economy.[108]

12.4 SECTOR REGULATION

12.4.1 *Ex ante* sector regulation

12.4.1.1 Substantive issues

(1) ***The market segments regulated*** On the basis of the three criteria to select market susceptible to sector regulation (i.e., high permanent and nonstrategic entry barriers, no competitive dynamics behind these barriers and inefficiency of antitrust remedies to solve the competitive problems), the Commission has proposed to the NRAs to analyse eighteen markets (seven retail and eleven wholesale).[109] In general, the Commission identified mainly upstream access markets because there is no barrier (or only low barriers) to enter the retail markets when wholesale regulation is efficient.[110]

On the fixed voice segment, the Commission identified two retail access markets (for residential and business customers), four retail services markets (same segmentation residential/business; and segmentation between local/national and international services), and three wholesale markets (call origination, transit and

[108] Moreover, the argument for a more interventionist competition law is weaker when there is a strong sector regulation as in this case, the authorities may rely on sector regulation instead of antitrust to achieve efficiency on the market.

[109] Commission recommendation 2003/311 of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation, OJ [2003] L 114/45.

[110] In fact, the few retail markets identified have been so for historical but not economical reasons.

call termination)[111] adding up to the whole connection between two customers. On the fixed broadband data segment, the Commission identified two wholesale access markets: access at the local loop level and access at the bitstream level, which is somewhat further up in the network.[112] On leased lines segment, the Commission identified one retail market (the minimum set of leased lines which corresponds to five types of leased up to 2 Mbits),[113] and two wholesale markets (terminating and trunk segments), which adds up to the whole connection between two customers. In the mobile segment, the Commission identified three wholesale markets: access and call origination as well as termination, which are the two extremes of the mobile network,[114] and international roaming, which presents specific economic problems.[115] In the broadcasting segment, the Commission identified only one wholesale market for broadcasting transmission.

In general, the NRAs have followed such market definitions, sometimes segmenting further the market defined by the Commission (in particular for the broadcasting market) and sometimes adding new markets (Table 12.3).[116]

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[111] The termination market is defined on each individual network because the 'calling-party pays' principle creates an externality between the caller (who ultimately pays the termination charge but does not choose the terminating network) and the called party (who chooses such network but does not pay the charge).

[112] Local loop refers to the physical circuit connecting the network termination point at the subscriber's premises to the main distribution frame (MDF) or equivalent facility in the fixed public network (article 2(e) of the Access Directive). Bitstream Access refers to the provision of transmission capacity between an end-user connected to a telephone connection and the point of handover to the new entrant (recommendation from the Commission of 26 April 2000 on unbundled access to the local loop, OJ [2000] C 272/55).

[113] Commission decision 2003/548 of 24 July 2003 on the minimum set of leased lines with harmonized characteristics and associated standards referred to in article 18 of the Universal Service Directive, O.J. [2003] L 186/43.

[114] See note 110.

[115] See note 64.

[116] Communication from the Commission of 6 February 2006 on Market Reviews under the EU Regulatory Framework: Consolidating the internal market for electronic communications, COM(2006) 28.

Table 12.3 Markets susceptible to sector regulation

	Retail markets	Wholesale markets
Fixed voice	1. Access for residential 2. Access for nonresidential 3. Local and/or national services for residential 4. International services for residential 5. Local and/or national services for nonresidential 6. International services for nonresidential	8. Call origination 9. Call termination on individual public networks 10. Transit
Fixed narrowband data		Idem 8
Fixed broadband data		11. Unbundled access (including shared access) to metallic loops and subloops 12. Wholesale broadband access
Fixed dedicated access	7. Minimum set of leased lines	13. Terminating segments 14. Trunk segments
Mobile voice		15. Access and call origination 16. Call termination on individual mobile networks 17. International roaming
Broadcasting		18. Broadcasting transmission services

(2) ***The remedies imposed*** Although, the NRAs have the choice between a list of five remedies (transparency, nondiscrimination, accounting separation, compulsory access and price control) and the obligation to only choose the proportionate ones, they impose in general the full suite of them on all markets, and in particular price control at forward looking long-term incremental cost.[117] Most regulators apply the ladder of investment which consists of regulating

[117] *Ibidem.*

the different rungs of an imaginary investment ladder (i.e., retailing, IP Networks, backhaul, DSLAM, local loop) and only removing regulation of one rung when entrants have climbed that rung.[118] Thus, the policy aims not only to create a level-playing field but also to actively support entrants. As a consequence, the NRAs regulate almost all markets of the long Commission list, with only few exceptions like some retail services markets and the wholesale fixed transit and mobile access that some NRAs decided not to impose any remedy (see Tables 12.6a–12.6c in the Appendix).

12.4.1.2 Institutional issues

The *horizontal relationships* between the NRAs have clearly been reinforced with the creation of the ERG, but are still insufficient to create a single market for electronic communications. In the *vertical relationship* between the Commission and the NRAs, the influence of the former has been considerable: it starts the SMP process by defining the markets to be analysed by the NRAs and usually such definitions are followed by NRAs and has already veto five draft decisions (without counting several draft decisions that have been withdrawn to alleviate such veto).[119]

12.4.2 Appraisal of the application of sector regulation

After more nearly three years of implementation, the new sector regulation which was more based on theoretical thinking than practical experience has not fully delivered the good governance principles it

[118] Cave and Vogelsang (2003); Cave (2006); ERG Broadband market competition report of May 2005, ERG(05) 23.

[119] See Table 12.7 of the Appendix. In addition, the Commission gives substantives indications in the prenotification meetings held with the NRAs to discuss in advance any controversial issue.

pursued.[120] In particular, the principles of proportionality and legal certainty are no achieved. Indeed, there is an increase of regulation as more market segments are regulated and more operators are regulated on each segment. At this stage, I can not prove that regulators have intervened beyond the optimal level because that would require a clear and articulated definition of optimal regulation as well as a full cost-benefit that has not be done until now and is outside the scope of this paper.[121] However, it is a fact that the never-ending expansion of regulation does not match to the deregulatory rhetoric of the European and national legislators and regulators. Also the strategies of the regulatory actors are not sufficiently clear in particular for the emerging markets (do they want to push for infrastructure-based competition of service-based competition, do they want short-term competition or long term competition, do they want to do industrial policy or not).

One reason of such failure is the lack of clear objectives in the law and the inability or unwillingness of the regulators to arbitrate between conflicting priorities. The legislator tried to hide the question of objectives and escape those conflicts by aligning sector regulation with antitrust methodologies. However, such methodologies do not evacuate the fundamental regulatory questions and worse, they add difficulties.[122] The main difficulty is that standard antitrust

[120] The principles were: flexibility, transparency, technological neutrality, harmonization, proportionality, and legal certainty. For an overview of the state of implementation of the sector regulation: communication from the Commission of 20 February 2006, European Electronic Communications Regulation and Markets 2005 (11th Implementation Report), COM(2006) 68.

[121] In particular, some argue that the ladder of investment has had a positive effect on investment and long term competition: Cave (2006) and ERG Broadband market competition report of May 2005, ERG(05) 23 whereas other argue that it is not the case: Oldale and Padilla (2004) and Hausman and Sidak (2005).

[122] Note also that antitrust principles are insufficient to base sector regulation because they detect all kinds of market power and are not able to screen the subset among them – hard core market power – that justify regulation. Thus, mere antitrust principles should be completed by other elements that have nothing to do with antitrust principles, that is, the three selection criteria.

principles were developed for antitrust practice in stable industries and need adaptations to be applicable in the context of the sector regulation for dynamic markets. First, standard antitrust principles are mainly suited to horizontal markets but need to be substantially modified to deal with vertical chains of production (which is the main focus of sector regulation).[123] For instance, standard antitrust principles would not by themselves be capable of defining a derived non-merchant wholesale market[124] and there is risk that the different services making a production chain are choked up in numerous artificially narrow antitrust markets.[125] Second, standard antitrust principles are suited to stable industries where competition is mainly in price but need to be adapted to deal with innovation and the Schumpeterian creative destruction competition.[126] Third, standard antitrust principle are suited to one-sided markets but need to be adapted to deal with two-sided markets where there are strong interactions between each side of the markets.[127]

[123] Larouche (2000, pp. 203–211) and Richards (2006, pp. 206–209).

[124] Although the Court of Justice admitted that the antitrust methodology may be used to define a hypothetical non-merchant wholesale market in case C-418/01 *IMS Health v NDC Health* [2004] ECR I-0000, para 44.

[125] This will become more problematic as the industry moves towards new-generation networks. According to the International Telecommunications Union, a new-generation network is 'a packet based architecture fostering the provisioning of existing and new/emerging services through a loosely coupled, open and converged communications infrastructures'.

[126] Audrestch et al. (2001), Dobbs and Richards (2004), and Evans and Schmalensee (2001). For instance, some monopoly power defined with static method may in fact increase welfare when it is necessary to increase innovation and when it is constrained by the threat of other innovation and creative destruction.

[127] Gual (2003), Evans (2003), and Rochet and Tirole (2004). When markets are two-sided, regulators should not only look at the level of the price on each side of the market, but also at the structure of the price between the different sides. In other words, it may be efficient that one side is charged below whereas the other side is charged above costs (cf. a heterosexual disco where usually women pay less and men more than the cost of entry).

In addition to this difficulty, there are several other drawbacks and risks with the alignment on antitrust principles. First, the use of a legal concept is always linked to the objective of the legal rule for which it is used. As the objectives of antitrust and sector regulation may differ (recall that the objective antitrust is the maximization of long term consumer welfare, whereas the objectives of sector regulation may be broader), the interpretation of a same antitrust concept may also differ creating legal confusion and uncertainty.[128] Second, antitrust principles are complex and have been under significant reform recently, moving from a legalistic form-based approach towards a more economic effects-based approach.[129] Third, and linked to institutional issues, antitrust principles do not constrain the NRAs very much in their actions (as many NRAs adapt them quite flexibly) but they do constrain the Commission in its comment under the article 7 review of NRAs' draft decisions (as the Commission always looks at the impact of its comments on its pending and future antitrust cases).

Therefore, critics propose to base sector regulation on the concept of bottleneck.[130] Indeed, the first best might be to base sector regulation on specific concept (like bottleneck) to alleviate confusion between antitrust and sector regulation objectives and to be simpler

[128] See the different interpretations of price squeeze in antitrust law and in sector regulation proposed by Grout (2002). Similarly, the first president of the French Supreme Court argues that a similar legal antitrust concept may be interpreted differently depending of the objectives of the legal instruments for which it is used: Canivet (2006, p. 5).

[129] Communication from the Commission of 20 April 2004, A pro-active Competition Policy for a Competitive Europe, COM(2004) 293.

[130] Larouche (2000, pp. 359–403), Richards (2006, p. 220), and Squire-Sanders and Analysys (1999, p. 147). The UK regulator Ofcom decided during its strategic review to base its equality of access regulation on enduring economic bottlenecks which are defined as 'the parts of the network where there are little prospects for effective and sustainable competition in the medium term'. It comprises wholesale line rental; metallic path facility, IPStream and backhaul extension service: Ofcom final statements of 22 September 2005 on the strategic review of the telecommunications, at para 4.6.

to use. However, there is already an implicit notion of bottleneck in the current sector regulation during the market selection step[131] and the complementary use of antitrust concepts is probably a second best option in the European context because it ensures a more economic approach and some harmonization between NRAs. However, it is important that antitrust concepts do not evacuate the question of objectives as it is the case today and that their underlying economic theories are adapted to the dynamic characteristics of the sector.

A second reason for the regulatory failures is that the institutional design has not been sufficiently thought through by the European legislature. In general, regulatory authorities do not have incentive to deregulate because of the well-established problems of state bureaucracy implying that authorities have a tendency to increase their activities[132] and the regulatory brakes of the current law (national appeal and Commission review) are not efficient enough. More critically, NRAs do not have incentives to take into account the dynamic side of competition (investment, innovation) but only the static side (evolution of price, number of competitors) because the indicators on which they are evaluated are mainly static (level of price, concentration index).[133] In other words, NRAs are performing relatively well with regard to their incentives, but such incentives are not aligned with the long-term welfare of the consumers.

Thus, there is a need to better adapt those incentives by evaluating the NRAs on more dynamics indicators and by reinforcing the regulatory brakes.

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[131] Recital 27 of the Framework Directive as interpreted by recitals 9–16 of the recommendation on relevant markets.

[132] The tendency to overregulate because of state bureaucracy may be counterbalance by a tendency to underregulate in the countries where NRAs are captured by the incumbents.

[133] See the yearly Commission implementation reports, available at http://europa.eu.int/information_society/policy/ecomm/implementation_enforcement/index_en.htm More dynamic indicators are currently being designed by the British NRA to evaluate the impact of the strategic review: Ofcom statement of 8 February 2006 on evaluating the impact of the strategic review of telecommunications.

12.5 OPTIMAL BALANCE BETWEEN RULES AND COORDINATION BETWEEN INSTITUTIONS

12.5.1 The optimal balance between antitrust and sector regulation

12.5.1.1 Market failures in electronic communications

Public authorities should aim to maximize the welfare of their citizens and markets are supposed to be the best means to ensure such welfare maximization. Thus, governments should intervene only when the mere functioning of the markets does not deliver this objective.

Economists distinguish between three types of market failure.[134] (1) The first market failure is the presence of excessive market power (e.g., a monopoly operator) which may lead to excessive price or too little innovation. Excessive market power is caused by legal and economic entry barriers or by anticompetitive behaviours. The concept of economic entry barriers is controversial in the literature with two opposing views.[135] The narrow (Stiglerian) view limits the barriers to the absolute cost advantages of the incumbents (e.g., access to best outlet in town, or consumer switching costs) but excludes all entrants' costs that have also been borne by the incumbents (e.g., high fixed and sunk costs). The broad (Bainian) view extends the concept of barriers to all factors that limit entry and enable incumbents to get a supranormal profit, hence includes absolute cost advantages but also economies of scale and scope. (2) The second market failure is the presence of an externality (like network externality or tariffs-mediated externality) which may lead to underconsumption in case of positive externality and overconsumption in

[134] Here I follow the definition of the International Competition Network (2006, p. 4), which considers that market failure occurs when resources are misallocated or allocated inefficiently (i.e., this includes misallocation in both static and dynamic sense), resulting in loss value, wasted resources, or some nonoptimal outcome.

[135] McAfee et al. (2004).

case of negative externality.[136] (3) The third market failure is the presence of information asymmetries (e.g., the absence of knowledge of the price) which may lead to under- or overconsumption.

In telecommunications, the two first categories lead to the standard distinction between (1) the one-way access (or access model) which concerns the provision of bottleneck inputs by an incumbent network provider to new entrants and (2) two-way access (or the interconnection model) which concerns reciprocal access between two networks that have to rely upon each other to terminate calls.[137]

In addition, each type of market failure may be structural and result from the supply and demand conditions of the market, or may be behavioural and artificially (albeit rationally) 'manufactured' by the firms, leading to the matrix shown in Table 12.4.[138] Since the decline of the structure–conduct–performance paradigm in industrial economics, it is now recognized that nonstrategic and strategic market failures are closely linked together and that structure influences conduct as much as conduct influences structure. However, it remains possible (and useful when choosing between the different instruments of public intervention) to identify the causes of the nonefficient market results and to distinguish between structural and behavioural market failures.

12.5.1.2 Choice between competition law and sector regulation

To tackle these different market failures, public authorities dispose of several legal instruments (in particular competition law,

[136] For instance, less than the optimal number of customers may decide to join a network if new customers are not compensated, when joining the network, for an increase in the welfare they create for the already existing customers. The ERG defines the network externality as 'the effect which existing subscribers enjoy as additional subscribers join the network which is not taken into account when this decision is made': ERG Common Position on remedies, p. 127.

[137] See Armstrong (2002), Laffont and Tirole (2000), and Vogelsang (2003).

[138] Several potential behavioural market failures have been identified by the ERG in its Revised Draft Common Position on remedies at Chapter 2.

Table 12.4 Market failure susceptible to public intervention.[139]

	Structural/nonstrategic	**Behavioural/strategic**
Excessive market power	***Cell 1*** – Bainain entry barriers: High and sunk fixed with uncertainty – Stiglerian entry barriers: Important absolute cost advantages (e.g., switching costs) – Legal barriers → *One-way access (access model)*	***Cell 2*** – Reinforcement of dominance – Vertical leveraging – Horizontal leveraging
Externality	***Cell 3*** – Network effects – Two-sided markets → *Two-way access (interconnection model)*	***Cell 4*** – Strategic network effects (e.g., loyalty program or tariff mediated externality
Information asymmetry	***Cell 5***	***Cell 6***

sector regulation, consumer law) that they must combine in the most efficient way. Specifically, to find the appropriate balance between competition law and sector regulation, regulators should determine the main differences between both instruments, confront them with the market failures to be dealt with and accordingly decide which instrument is the most efficient in solving the market failure.

According to the present author,[140] the two principal and related substantive differences are that (1) sector regulation mainly deals

[139] This table is only a stylized and static view of the market reality that is more a starting point to raise the relevant questions than a checklist to provide definitive answers on the scope of public intervention. Telecommunications markets are intrinsically dynamic and a rationale based on static view may lead to inappropriate and overinclusive public intervention. For instance, a high level of market power does not always lead to long term inefficiencies justifying intervention.

[140] On the differences between sector regulation and antitrust law, see also Laffont and Tirole (2000, pp. 276–279), Katz (2004), and Temple Lang (2006). Many authors consider the main difference is that antitrust law aims at maintaining the level of competition whereas sector regulation aims at increasing the level of competition. According to the present author, the difference is not always verified in practice as some antitrust decisions (in particular merger decisions) and that has been endorsed the community courts.

with unsatisfactory market structures whereas competition law deals with unsatisfactory firms' behaviours, and (2) the burden of proof for sector regulation to intervene on the selected markets[141] is lower than in the case of antitrust law. The main institutional difference is that (3) sector regulation is only applied by national authorities, whereas antitrust law is applied by European authorities as well (the Commission).

Because of the *first* difference (related to structure and behaviours), it is efficient that sector regulation deals with structural market failures and competition law deals with behavioural ones. Because of the *second* difference (related to the burden of proof), it is efficient that the factor used to select markets for regulation is set at a very high level because once a market area is selected, intervention is relatively easy. In other words, the regulation should focus on market where the risks of type I errors (false condemnation) are low and the risks of type II errors (false acquittal) are high.[142] This is especially important because the costs of type I errors are large in dynamic markets.[143] Taking both arguments together, any possible regulation should limited to cells 1 and 3 of Table 12.4, that is, structural market failures due to excessive market power and externalities.

Because of the third difference (related to institutional design), it might be justified that antitrust law applies in addition to sector regulation when NRAs have not performed their tasks adequately.[144]

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[141] The burden of proof for sector regulation to intervene is high when all steps of Table 12.1 are considered, but is low when steps 1 and 2 are passed.

[142] I link here the burden of proof to intervene with the risks and the costs of type I and type II errors, following the tradition of the Chicago School recently revived by *inter alia* Evans and Padilla (2004).

[143] Hausman (1997) valued the delay of the introduction of voice messaging services from late 1970s until 1988 at US$ 1270 million per year by 1994, and the delay of the introduction of mobile service at US$ 100 000 million, large compared with the 1995 US global telecoms revenues of $180 000 million/year.

[144] That was the case in the decision *Deutsche Telekom*. However, it is a better institutional design that regulatory decisions are controlled by judicial bodies (a national court or ultimately the European Court of Justice) instead of an antitrust authority: Larouche (2005, p. 175) and Petit (2005, p. 198).

The question is then whether those optimal rules are followed. The practice under article 82 EC is in line with the rules as the Commission and the NCAs passed the case to the NRAs when possible and only decided the case when the regulators could not intervene or were intervening unsatisfactorily. The practice of the merger regulation also respects the rules as under the previous rigid 1998 sector regulation (where the possibility to impose regulation was limited)[145] the Commission imposed many obligations to complement NRA, whereas under the current 2003 sector regulation (which is more flexible to impose regulation) the Commission imposes less merger remedies.

12.5.2 The optimal institutional coordination

An optimal coordination between the many institutions involved in the regulation of the electronic communications is primordial given the overlapping jurisdictions between several authorities, hence the risks of forum shopping by complainants, increased regulatory costs, or conflicting decisions.[146]

First, the mechanisms for *horizontal coordination* between the NCAs of the twenty-five member states(i.e., the European Competition Network and the important role of the Commission *as primus inter partes*) are sufficient given their already strong European attitude. However, the mechanisms for horizontal coordination among the NRAs of the twenty-five member states(i.e., ERG) are insufficient because they are much less Europeanized than their antitrust counterparts.[147] Thus, coordination mechanisms should be

[145] On this regulatory framework, see Garzaniti (2000), and Larouche (2000).

[146] On the need for coordination see: Larouche (2005, pp. 166–170), and Petit (2005, pp. 182–187).

[147] This is partly due to the fact that most NCAs have been created after that the Commission has played a substantial role in applying and modelling the competition law, whereas NRAs have been created before that the Commission play an active role in modelling the sector regulation.

reinforced, possibly with the creation of a European regulatory authority.

Second, the mechanisms for *vertical coordination* between the Commission and the NCA (i.e., possibility of decease of the Commission and infringement procedures) are sufficient. However, the mechanisms for coordination between the Commission and the NRAs (i.e., Commission review and infringement procedure) are insufficient because they are weaker than those antitrust coordination mechanisms and yet NRAs are less Europeanized. Thus, they should be strengthened to achieve an internal market for electronic communications.

Third, the mechanisms for *transversal coordination* between the NCA and the NRA of a specific country need to be reinforced in most of the member states. There is no optimal model as such relationships depend very much on the institutional characteristics of each country,[148] but improvements may be achieved by integrating the NRA inside the NCA (as done in New Zealand) or by having a clearer division of tasks between authorities.[149]

Fourth, the mechanisms for *diagonal coordination* between the Commission and the NRA of each member state need to be clarified, possibly by a better division of tasks between authorities.

12.6 CONCLUSION

To conclude,

Antitrust authorities are justified to intervene more strictly in electronic communications sector (or more generally network industries), but their interventions should always be based on sound economic rationale and the same extensive approach should not permeate other sectors of the economy.

[148] International Competition Networks (2006, pp. 26–29).

[149] Larouche (2005, p 176) proposes, on the basis of the experience so far, that the Commission and the NCAs would be in charge of the assessment of dominance, whereas the NRAs would be in charge of the choice of remedies.

Sector regulation is justified to be aligned on antitrust principles because of the institutional structure of the European Union, but it is only a second best, and alignment of concepts should not lead to an alignment of objectives. Indeed, the antitrust principles should neither be mystified (*Même la plus belle fille du monde ne peut donner que ce qu'elle a*) nor demonized. These are like economic glasses to be put by a public authority, no more, no less. They do not evacuate the fundamental regulatory questions to be solved (what type of competition the regulator is aiming for? what is the timeframe of regulatory intervention?) and do not pre-empt on the objectives to be followed.

Sector regulation and competition law are converging but some important divergences remain, in particular regarding the burden of proof and the institutions in charge. Such divergences should determine the scope of sector regulation which should only be applied when more efficient than antitrust, that is, when costs and the risks of type I errors are small and the costs and the risks of type II errors are large.

Sector regulation should respect good governance principles: flexibility, objectivity, transparency, harmonization, proportionality (in particular regulatory creep should be alleviated) and legal certainty. NRAs should be cautious not to automatically extend a regulatory approach suited for infrastructures laid down under legal monopoly conditions to new Schumpeterian infrastructures and should be less hypocritical about their actions (and not invoke the mantra of deregulatory rhetoric when they are increasing regulation for good or for wrong/poor reasons).

The institutional design should be better taken into account when establishing the rules[150] and in particular the transversal coordination between regulatory authorities with overlapping competences should be developed.

[150] See in general Sapir (2004).

APPENDIX

Table 12.5 Statistics of merger cases

	All cases			Electronic communications cases[151]		
	Total	**With remedies**	**Prohibition**	**Total**	**With remedies**	**Prohibition**
1990	12	0	0	0	0	0
1991	63	6	1	1	0	0
1992	60	7	0	3	0	0
1993	58	2	0	3	0	0
1994	95	4	1	6	0	1
1995	110	6	2	14	0	2
1996	131	3	3	12	1	0
1997	172	9	1	15	1	0
1998	235	16	2	26	2	2
1999	292	27	1	28	5	0
2000	345	40	2	56	9	1
2001	335	23	5	43	2	0
2002	279	15	0	17	1	0
2003	212	17	0	9	2	0
2004	249	16	1	13	0	0
2005	313	15	0	29	0	0
TOTAL	**2661**	**206**	**19**	**275**	**23**	**6**
	100%	**7.0%**	**0.6%**	**9.3%**		
				100%	**8.4%**	**2.2%**

Source: European Commission.

[151] NACE code I.64.20 (telecommunications) and O.92.20 (radio and television activities).

Table 12.6a List of *ex ante* decisions with remedies, under Merger Regulation and article 81 EC (as of April 2006)

Case	Date	No.	Legal basis (*)	Publication (**)	Cat***
Eirpage	18 Oct. 1991	32.737	81.3 EC	O.J. [1991] L 306/23	2
BT/MCI	27 July 1994	34.857	81.3 EC	O.J. [1994] L 223/36	1
Atlas	17 July 1996	35.337	81.3 EC	O.J. [1996] L 239/23	1
Phoenix/Global One	17 July1996	35.617	81.3 EC	O.J. [1996] L 239/57	1
RTL/Veronica/Endemol II	17 July 1996	M. 553	8.2 MR	O.J. [1996] L 294/14	3
BT/MCI (II)	14 May1997	M. 856	8.2 MR	O.J. [1997] L 336/1	1
Unisource Obligations	29 Oct. 1997	35.830	81.3 EC	O.J. [1997] L 318/1	1
repealed in Unisource (II)	29 Dec. 2000	36.841		O.J. [2001] L 52/30	
Uniworld	29 Oct. 1997	35.738	81.3 EC	O.J. [1997] L 318/24	1
WorldCom/MCI	8 July 1998	M. 1069	8.2 MR	O.J. [1999] L 116/1	1
NC/Canal+/CDPQ/	3 Dec. 1998	M. 1327	6.2 MR		1
BankAmerica					
BT/AT&T	30 March 1999	JV. 15	8.2 MR		1
TPS	3 March 1999	36.237	81.3 EC	O.J. [1999] L 90/6	3
Upheld in Metropole	**18 Sept. 2001**	**T-112/99**		**ECR [2001] II-2459**	
Cégétel+4	20 May 1999	36.592	81.3 EC	O.J. [1999] L 218/14	1
Vodafone/AirTouch	21 May 1999	M. 1430	6.2 MR		2
AT&T/MediaOne	23 July 1999	M. 1551	6.2 MR		1
Télécom Développement	27 July 1999	36.581	81 EC	O.J. [1999] L 218/24	1
BiB/Open	15 Sept. 1999	36.539	81.3 EC	O.J. [1999] L 312/1	3
Telia/Telenor	13 Oct. 1999	M. 1439	8.2 MR	O.J. [2001] L 40/1	1
Orange/Mannesmann	20 Dec. 1999	M. 1760	6.2 MR		2
TelekomAustria/Libro	28 Feb. 2000	M. 1747	6.2 MR		1
BSkyB/KirchPayTV	21 March 2000	JV. 37	6.2 MR		
Upheld in ARD	**30 Sept. 2003**	**T-158/00**		**ECR [2003] II-XXX**	3
BT/Esat	27 March 2000	M. 1838	6.2 MR		1
EADS	11 April 2000	M. 1745	6.2 MR		
Vodafone/Mannesmann	12 April 2000	M. 1795	6.2 MR		2
Vodafone/Vizzavi/Canal+	20 July 2000	JV. 48	6.2 MR		3
FranceTelecom/Orange	11 Aug. 2000	M. 2016	6.2 MR		2
AOL/TimeWarner	11 Oct. 2000	M. 1845	8.2 MR	O.J. [2001] L 268/28	3
Vivendi/Canal+/Seagram	13 Oct. 2000	M. 2050	6.2 MR		3
YLE/TDF/Digita	21 June 2001	M. 2300	6.2 MR		3
Pirelli/Telecom Italia	20 Sept. 2001	M. 2574	6.2 MR	IP/02/1183	1
Modification remedies	5 Aug. 2002				
Telia/Sonera	10 July 2002	M. 2803	6.2 MR		1
NewsCorp/Telepiù	2 April 2003	M. 2876	8.2 MR	O.J. [2004] L 110/73	3
DaimlerChrysler/DT	30 April 2003	M. 2903	8.2 MR	O.J. [2003] L 300/62	3
UK Network sharing	30 April 2003	38.370	81.3 EC	O.J. [2003] L 200/59	2
Network Sharing	16 July 2003	38.369	81.3 EC	O.J. [2004] L 75/32	2
Rahmenvertrag					

Table 12.6a (*Continued*)

Partly annulled in O2 Germany	**2 May 2006**	**T-328/03**		**ECR [2006] II-XXX**	
Telenor/Canal+	29 Dec. 2003	38.287	81.3 EC		3
Telefonica/O2	10 Jan. 2006	M. 4035	6.2 MR		2
T-Mobile/tele.ring	26 April 2006	M. 3916	8.2 MR		2

Table 12.6b List of ex ante decisions – prohibition

Case	Date	No.	Legal basis	Publication	Cat
MSG Media Service	9 Nov. 1994	M. 469	8.3 MR	O.J. [1994] L 364/1	3
Nordic Satellite Distribution	19 July 1995	M. 490	8.3 MR	O.J. [1996] L 53/20	3
RTL/Veronica/Endemol (I)	20 Sept.1995	M. 553	8.3 MR	O.J. [1996] L 134/32	3
Upheld in appeal Endemol	**28 April 1999**	**T-221/95**		**ECR [1999] II-1299**	
Bertelsmann/Kirch/ Premiere	27 May 1998	M. 993	8.3 MR	O.J. [1999] L 53/1	3
Appeal removed		**T-123/98**			
Deutsche Telekom/BetaResearch	27 May 1998	M. 1027	8.3 MR	O.J. [1999] L 53/31	3
MCIWorldCom/Sprint	28 June 2000	M. 1741	8.3 MR	O.J. [2003] L 300/1	1
Annulled in MCI WorldCom	**28 Sept. 2004**	**T-310/00**		**ECR [2004] II-XXX**	

Table 12.6c List of *ex post* decisions (article 82 EC)

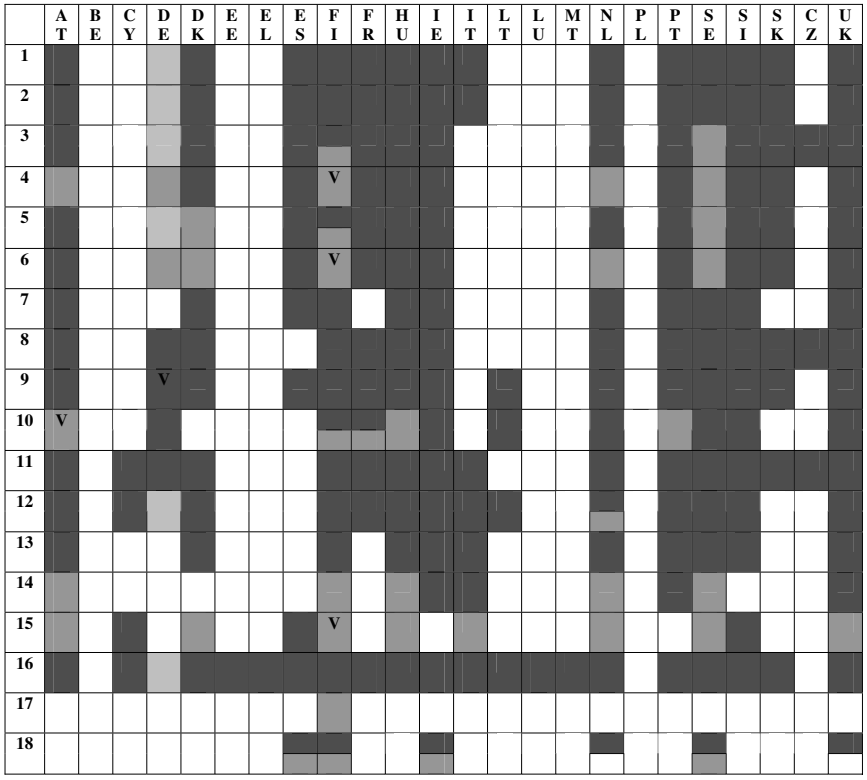
Case	Date	No.	Legal basis	Publication	Cat
British Telecom	10 Dec. 1982	29.877	82 EC	O.J. [1982] L 360/36	1
Upheld in appeal	**20 March 1985**	**41/83**		**ECR [1985] 873**	
Deutsche Telekom	21 May 2003	37.451	82 EC	O.J. [2003] L 263/9	1
Appeal pending		**T-271/03**			
Wanadoo	16 July 2003	38.233	82 EC		1
Appeal pending		**T-340/03**			

(*) 6.2 MR: Merger Regulation, remedies in phase I; 8.2 MR: Merger Regulation, remedies in phase II; 81.3 EC: EC Treaty, individual exemption.

(**) If no mention, the decision is published on the web site of DG Competition.

(***) Category 1: Fixed (including Internet or cable) or fixed and mobile services; category 2: Mobile services; category 3: Content-related services.

Table 12.7 SMP analysis in the twenty-five member states (as of April 2006)



Legend

	Regulation
	No regulation
	SMP designation, but remedies not yet decided
	Not yet decided

V: Commission veto

Statistics: phase I without comments: 33 per cent; phase I with comment: 65 per cent; phase II accepted: 0.6 per cent; phase II vetoed: 1.5 per cent.

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